

ABSTRACT

An image processing method obtains a glassless image from a color frontal facial image bearing glasses by using a recursive principal component analysis (PCA) reconstruction. The image processing method comprises the steps of a) receiving an RGB color frontal facial image; b) extracting candidates of eye regions from the received RGB color frontal facial image; c) determining an exact eye region out of the candidates and normalizing the received RGB color frontal facial image; d) extracting a glasses frame region by using color information contained in the received RGB color frontal facial image and edge information of a glasses frame; e) performing an RGB-HSI transformation on the normalized frontal facial image; f) generating H', S', and I' glassless compensated images; g) obtaining R', G', and B' compensated images by performing an HSI-RGB transformation on the H', S', and I' glassless compensated images; and h) creating a glassless final color facial image on the basis of the R', G', and B' compensated images.